

## REMARKS

In response to the above-identified Office Action, Applicant traverses the Examiner's rejection to the claims and seeks reconsideration thereof. Claims 1-15 are now pending in the present application. In this response, no claims have been amended, no claims have been added and no claims have been cancelled.

The instant application is directed to a metal-oxide-semiconductor field effect transistor (MOSFET) device comprising, a channel region formed on a monocrystalline silicon layer of a silicon-on-insulator (SOI) substrate, a source/drain region formed in the monocrystalline silicon layer and comprising a deep junction region and a shallow extension region, a first silicon oxide film pattern formed on the monocrystalline silicon layer to contact the deep junction region and doped with a first impurity of a first conductivity type at a first concentration, a second silicon oxide film spacer formed on the monocrystalline silicon layer to contact the shallow extension region and doped with a second impurity of the first conductivity type at a second concentration, a gate electrode formed on the channel region and having a T-shaped section and a gate dielectric film interposed between the channel region and the gate electrode.

### **I. Restriction/Election**

Applicant respectfully acknowledges the Examiner's recognition of Applicant's election without traverse of Group I (claims 1-8) and withdrawal of Group II (claims 9-15) in the outstanding Action.

### **II. Claim Rejections – 35 U.S.C. §103(a)**

**A.** The Examiner rejects Claims 1-4 and 8 under 35 U.S.C. 103(a) as being unpatentable over Levin in view of U. S. Patent No. 5,231,038 issued to Yamaguchi et al ("Yamaguchi") in view of U. S. Patent No. 6,455,376 issued to Fan et. al. ("Fan").

To render a claim obvious, the relied upon references must disclose every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art. MPEP §2143. Furthermore,

there must be a showing of suggestion or motivation to modify or combine the teachings of those references. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

As an initial matter, Applicant requests the Examiner clarify the basis for rejecting the claims over Levin. The Examiner states the claims are obvious over Levin however does not identify the patent number, publication number or serial number of Levin. Accordingly, Applicant has been unable to locate the relied upon reference. Moreover, the Examiner fails to indicate which elements of the claims Levin teaches or the motivation for combining Levin with the other references. Accordingly, in the remarks that follow, Applicant is unable to respond to the Examiner's rejection of the claims over Levin. If the Examiner maintains the rejection over Levin, Applicant respectfully requests clarification.

In regard to Claim 1, Applicant respectfully submits neither Yamaguchi nor Fan teach or suggest at least the element of "a second silicon oxide film spacer formed on the monocrystalline silicon layer to contact the shallow extension region and doped with a second impurity of the first conductivity type at a second concentration" as recited in Claim 1. In the outstanding Action, the Examiner admits Yamaguchi fails to teach or suggest a deep junction region and a shallow extension region. The Examiner, however, alleges the shallow extension region is obviously set into the Yamaguchi source/drain region and is suggested by Fan. Applicant respectfully disagrees and submits neither of the references alone or in combination teach the formation of the silicon oxide film spacer to contact the shallow extension region. As illustrated in Figure 1H of Yamaguchi, the alleged second silicon oxide film 46 does not contact the source/drain region 49/50 referenced by the Examiner. Accordingly, even if a shallow extension region were set into the source/drain region 49/50 as stated by the Examiner, it would not contact a second silicon oxide film spacer as recited in Claim 1. For at least the foregoing reasons, each and every element is not taught or suggested by Yamaguchi in view of Fan.

Moreover, even if it were possible to point to a portion of Yamaguchi and Fan teaching each element of the claims, the Examiner has not provided a sufficient motivation for the relied upon combination. The Examiner alleges it would have been obvious to one having ordinary skill in the art to apply the teachings of Fan to Yamaguchi for the purpose of improving performance characteristics of the device. As the Examiner is no doubt aware, the Examiner has the burden of providing a “convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). Applicant respectfully submits, the Examiner’s statement that the combination would have been obvious for “improving the performance characteristics of the device” certainly does not provide a convincing line of reasoning in support of the combination. Since the Examiner has not set forth a sufficient motivation for the referenced combination, Yamaguchi in view of Fan may not be relied upon to render the claims obvious. Thus, since each and every element of Claim 1 is not taught or suggested by the references, a *prima facie* case of obviousness may not be established. For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1 under 35 U.S.C. §103.

In regard to Claims 2-4 and 8, Claims 2-4 and 8 depend from Claim 1 and incorporate the limitations thereof. Thus for at least the reasons discussed above in regard to Claim 1, the references fail to teach or suggest the element of “a second silicon oxide film spacer formed on the monocrystalline silicon layer to contact the shallow extension region and doped with a second impurity of the first conductivity type at a second concentration” as found in Claims 2-4 and 8. Since each and every element of Claims 2-4 and 8 is not taught by Yamaguchi and Fan, a *prima facie* case of obviousness may not be established. For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 2-4 and 8 under 35 U.S.C §103.

B. The Examiner rejects Claims 5-7 under 35 U.S.C. 103(a) as being unpatentable over Levin in view of Yamaguchi and Fan in view of U. S. Patent No. 5,187,559 issued to Isobe ("Isobe").

Claims 5-7 depend from Claim 1 and incorporate the limitations thereof. As discussed in regard to Claim 1, Yamaguchi and Fan fail to teach or suggest at least the element of "a second silicon oxide film spacer formed on the monocrystalline silicon layer to contact the shallow extension region and doped with a second impurity of the first conductivity type at a second concentration" as found in Claims 5-7. The Examiner has not pointed to, and Applicant is unable to discern, a portion of Isobe teaching this element.

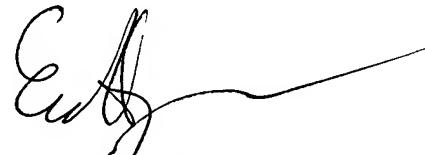
Moreover, the combination of Yamaguchi, Fan and Isobe is improper. As previously discussed, the Examiner has not provided a sufficient motivation for combining Yamaguchi with Fan. The Examiner's motivation for combining Isobe is identical to that stated above, namely, that it would have been obvious to modify Yamaguchi by Isobe for the purpose of improving the performance characteristics of the device. As previously discussed, the Examiner's statement does not provide a convincing line of reasoning in support of the combination. Since the Examiner has not set forth a sufficient motivation for the referenced combination, Yamaguchi and Fan in view of Isobe may not be relied upon to render the claims obvious. Thus, since each and every element of Claims 5-7 is not taught or suggested by the references, a *prima facie* case of obviousness may not be established. For at least the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 5-7 under 35 U.S.C. §103.

## CONCLUSION

In view of the foregoing, it is believed that all claims now pending, are in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP



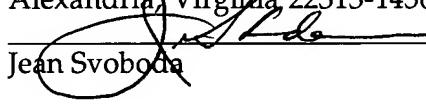
Dated: July 26, 2005

By: \_\_\_\_\_  
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### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail with sufficient postage in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia 22313-1450 on July 26, 2005.

  
Jean Svoboda